

WHAT IS CLAIMED IS:

1. A rotary electric machine comprising:
 - a rotor;
 - a stator core disposed to oppose the rotor, wherein the stator core is formed with a plurality of slots extending in an axial direction, and each of the slots is defined with a first wall and a second wall that oppose each other in a circumferential direction; and
 - a stator winding wound around the stator core, wherein the stator winding includes insertion portions held in the slots and each of the insertion portions has a circumferential width that is smaller than a distance between the first wall and the second wall of the slot, wherein the insertion portion contacts one of the first wall and the second wall of the slot.
2. The rotary electric machine according to claim 1, wherein each of the insertion portions has a first surface and a second surface opposite to each other, and the first surface and the second surface face the first wall and the second wall of the slot, respectively.
3. The rotary electric machine according to claim 2, wherein the slot and the insertion portion have substantially rectangular-shaped cross-sections.
4. The rotary electric machine according to claim 1, wherein a plurality of the insertion portions is arranged in line

along a radius of the stator core in each of the slots, and the insertion portions alternately contact the first wall and the second wall of the slot.

5. The rotary electric machine according to claim 1, wherein the stator winding is constructed of a plurality of substantially U-shaped conductor segments each having a first insertion portion, a second insertion portion and a turn portion connecting between the first and second insertion portions.

6. The rotary electric machine according to claim 5, wherein a distance between the first insertion portion and the second insertion portion is variable by resilient deformation of the turn portion, and the first and second insertion portions respectively contact one of the first wall and the second wall by spring back of the resilient deformation.

7. The rotary electric machine according to claim 6, wherein the first insertion portion and the second insertion portion are held in different slots.